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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,877	02/11/2004	Michael Brauss	79570	3369
22242	7590	05/16/2005	EXAMINER	
FITCH EVEN TABIN AND FLANNERY 120 SOUTH LA SALLE STREET SUITE 1600 CHICAGO, IL 60603-3406			YUN, JURIE	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/776,877

Applicant(s)

BRAUSS, MICHAEL

Examiner

Jurie Yun

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 39-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 and 39-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 32-38 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/13/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because it is unclear which drawings are to be used. The drawings filed 6/17/04 do not include Figures 12A-C as originally present in the initial set of drawings of 2/11/04 and of which are described in the brief description of the drawings. Also, Figure 18 is completely different in the drawings filed 6/17/04, but the specification seems to describe the originally filed Figure 18 (filed 2/11/04).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-31 and 39-43, drawn to a non-destructive testing system, classified in class 378, subclass 199.
- II. Claims 32-38, drawn to a cooling system for cooling a heat source, classified in class 313, subclass 11.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the cooling system can be used in a system other than a non-destructive testing system.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Stephen S. Favakeh on 4/29/05 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-31 and 39-43. Affirmation of this election must be made by applicant in replying to this Office action. Claims 32-38 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

6. Claims 16-23 are objected to because of the following informalities: they all recite "The cooling system of..." and should say "The non-destructive testing system of ..." Appropriate correction is required.

7. Claims 25-31 are objected to because of the following informalities: they all recite "The cooling system of..." and should say "The X-ray diffraction device of..." Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for X-rays, does not reasonably provide enablement for radiation other than X-rays such as neutrons, radio frequency, ultrasound, etc.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. The structural limitations conveyed by an "X-ray goniometer head" and "X-ray head" are unclear.

12. Claims 24 and 39 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. The

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structural limitations conveyed by "X-ray diffraction tube" are unclear. How is this different than any other X-ray tube?

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peralta et al. (USPN 5,596,622).

15. With respect to claim 1, Peralta et al. disclose a non-destructive testing system comprising: an energy emitter head assembly (14) for directing high energy at an object to be tested; a detector (28) that detects resultant energy from the object; a coolant flow path (17) formed in the head assembly (the coolant flow path (17) runs through the x-ray tube (14)); a filter (Fig. 7, 714 & 716 & column 9, lines 20-24); and a detachable connection between the filter and the head assembly that allows the filter to be quickly and easily detached from the head assembly for filter servicing while substantially leaving the remainder of the head assembly intact and assembled together (claim 6, section f, explicitly teaches a removeable filter; column 2, lines 51-62 & column 3, lines 57-61). Although Peralta et al. depict the filters in an embodiment in which they are located in a cart, it is disclosed that they could also be located with the x-ray tube in the CT scanner (column 9, lines 20-24). The filters are also taught to be replaceable, and thus detachable, while the x-ray tube does not get removed.

Peralta et al. do not specifically disclose a filter holder, but the filters that are taught would have to be held in the system by some type of holding means. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have filter holders for each of the filters taught by Peralta et al., to fasten the filters to the apparatus.

16. With respect to claims 2-4, Peralta et al. do not specifically disclose the filter holder comprises a cover plate for being secured to the head assembly and a filter screw for being threaded to the cover plate, wherein the filter screw can be unthreaded from the cover plate for filter servicing with the cover plate attached to or removed from the head assembly; wherein the detachable connection is a threaded connection.

Peralta et al. are silent as to the details of the filters and how the filters are attached. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a cover plate for the filter holder, to secure the filter within the holding means. It would have been obvious to one of ordinary skill in the art to use a threaded coupling as the means for fastening the cover plate and to use a threaded connection in view of automotive filters which are extremely well known.

17. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peralta et al. (USPN 5,596,622) as applied to claim 1 above, and further in view of Workman et al. (USPN 4,412,345).

18. With respect to claim 5, Peralta et al. do not disclose the emitter head assembly is an X-ray goniometer head, and the detector comprises a pair of detectors carried by

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the X-ray head. Workman et al. disclose an emitter head assembly (11) is an X-ray goniometer head, and a pair of detectors (40 & 50) carried by the X-ray head. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cooling system of Peralta et al. in the Workman et al. goniometer head assembly, because all X-ray tubes need to be cooled.

Allowable Subject Matter

19. Claims 6-23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

20. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to disclose a non-destructive testing system comprising an X-ray diffraction tube and a housing surrounding at least a portion of the X-ray diffraction tube, and a filter holder having a head portion and a stem portion with the filter carried in the stem portion, the housing including a receptacle for receiving the filter holder to allow the filter to be disposed in the flow channel to thereby provide cleaning of the liquid coolant, as claimed.

21. Claims 24-31 and 39-43 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

22. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to disclose an X-ray diffraction device comprising an X-ray diffraction tube, a filter holder having a head portion and a hollow stem portion, a filter carried in the hollow stem portion, and the housing including a receptacle for removably

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receiving the filter holder so as to dispose the filter in the flow channel to thereby provide cleaning of the cooling medium, as claimed. Prior art fails to disclose a method of cooling an X-ray diffraction tube comprising providing a filter holder having a head portion and a stem portion, providing a filter, carrying the filter on the stem portion, receiving the filter holder in the housing so as to dispose the filter in the flow channel, and flowing the liquid coolant through the flow channel so as to filter the liquid coolant, as claimed.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Yun whose telephone number is 571 272-2497. The examiner can normally be reached on Monday-Friday 8:30-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

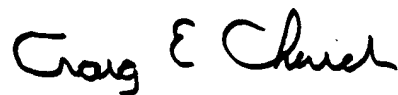
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Jurie Yun
May 3, 2005

A handwritten signature in black ink, appearing to be 'JY' with a stylized flourish.A handwritten signature in black ink, reading 'Craig E Church' in a cursive style.

Craig E. Church
Primary Examiner